

Claims:

1. A diagnostic test for otitis media, comprising: detecting the presence and measuring the viscosity of middle ear effusion in a human patient; and comparing the measured viscosity of the middle ear effusion in the human patient with at least three predetermined values for effusion viscosity, wherein such comparison provides information regarding the likelihood of presence of bacterial infection in the middle ear effusion in the human patient.
2. The diagnostic test of claim 1 wherein each of said predetermined values is based on a plurality of predetermined ranges of fluid viscosity measurements.
3. The diagnostic test of claim 2 wherein the predetermined ranges of fluid viscosity measurements are obtained from fluid viscosity measurements selected from the group consisting of middle ear effusions from the general human population, middle ear effusions from a select population of human subjects, and simulated middle ear effusions from a model system, and wherein said comparing step comprises determining in which of said plurality of predetermined fluid viscosity ranges the human patient's middle ear effusion viscosity falls.
4. A method for detecting in an animal the presence and characterizing the viscosity of middle ear effusion by transmitting a signal into an ear canal of the animal, receiving a reflection of the signal, and comparing the received signal with a standard comprising a range of signals obtained with fluids of varying viscosities, wherein the range of signals are normalized to reflect a measurement of viscosity.
5. The method according to claim 4 wherein at least one ultrasound transducer is used for signal transmission and reception.
6. A method for determining if a human patient is a candidate for receiving antibiotic treatment, wherein the presence of middle ear effusion in the patient is detected and the effusion viscosity is determined and compared with at least one predetermined fluid viscosity value.
7. The method of claim 6 wherein an ultrasound probe is used to detect and measure effusion viscosity.